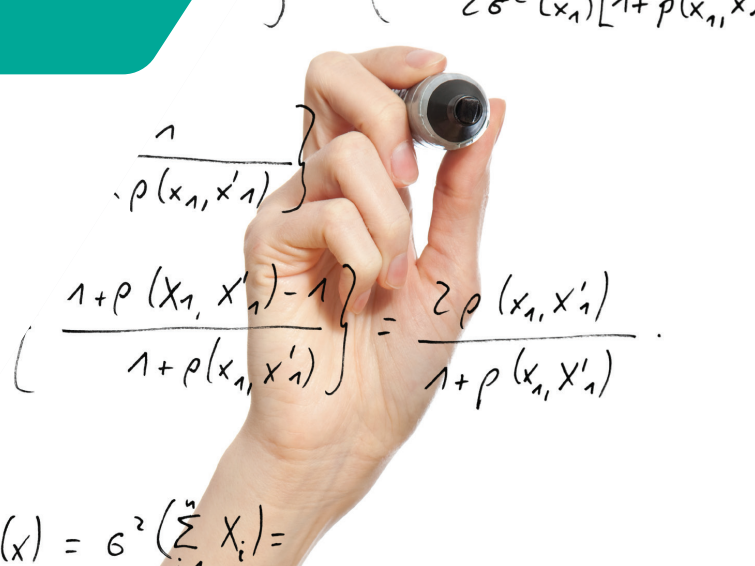




University College Dublin  
Ireland's Global University



## MA Mathematics (16 Months Full Time)

The MA in Mathematics is designed for graduates who wish to obtain a masters degree in Mathematics but who have not completed a four-year honours BSc in Mathematics. It combines components of the Higher Diploma in Mathematical Sciences and the MSc in Mathematical Sciences to offer an opportunity for a student to complete an MA in Mathematics within a 16-month period. The MA contains two streams – Mathematics or Applied and Computational Mathematics. Both streams offer an attractive alternative to the

more standard 24-month pathway of the Higher Diploma followed by the MSc in Mathematical Sciences. On successful completion of the programme you will have the knowledge, experience and confidence to pursue a PhD in mathematics, or a related discipline, have attained an advanced and modern mathematical and computational training, developed excellent presentation skills and acquired a much sought-after qualification that can be applied to a wide variety of careers in the quantitative, financial, and IT sectors.

## Why study at UCD?



### Tradition

Established 1854, with 160 years of teaching & research excellence



### Global profile

UCD is ranked in the top 1% of higher education institutions worldwide



### Global community

Over 6,000 international students from over 120 countries study at UCD



### Global careers

Degrees with high employability; dedicated careers support; 1 year stay-back visa



### Safety

Modern parkland campus with 24 hour security, minutes from Dublin city centre

### Key Fact

The UCD School of Mathematics and Statistics is a dynamic, multidisciplinary school spanning the disciplines of Mathematics, Applied and Computational Mathematics, Statistics and Actuarial Science. The School engages in research of international renown and teaches students across all disciplines. As well as having a strong commitment to basic research, several members in the school are involved in the UCD Institute for Discovery and the Insight Centre for Data Analytics.

## Course Content and Structure

120 credits  
taught masters

90 credits  
taught modules

30 credits  
project work

Students in the Mathematical stream choose modules from a selection of Mathematics courses. Students in the Applied and Computational Mathematics stream select modules within both the subjects of Mathematics and Applied and Computational Mathematics. Below is a representative list of modules available to you. Modules offered change from year to year.

- Calculus of Several Variables
- Vector Integral and Differential Calculus
- Linear Algebra 2
- Groups, Rings and Fields
- Functions of One Complex Variable
- Ring Theory
- Combinatorics
- Cryptography and Elliptic Curves
- Modular Forms of One Variable
- Number Theory
- Matrix Theory
- Mathematical Theory of PDEs
- Fractal Geometry
- Dynamical Systems
- Survey of Applied and Computational Mathematics
- Advanced Computational Science
- Foundations of Fluid Mechanics
- Advanced Fluid Mechanics
- Numerical Algorithms
- Case Studies in Simulation Science
- Differential Geometry for Relativity

Modules and topics shown are subject to change and are not guaranteed by UCD.

## Career Opportunities

The MA in Mathematics will give you the opportunity to develop numeracy, organisation and problem-solving skills, which are required in areas such as the trading floor of an investment bank, the mathematics classroom, predicting the weather and in the insurance industry. Some of the careers chosen by our graduates include working as researchers in mathematics (both in academia and industry), actuarial consultants, risk analysts, meteorologists, IT consultants, and second- and third-level teaching.

Prospective employers include Aquamarine Power, Alcatel-Lucent, Bureau Veritas, Campbell Scientific, IBM, IFSC, Intel, Google, Lloyds, Marine Institute, Met Eireann, Microsoft, Nokia, Norkom, Numerica Corporation, OpenHydro, Paddy Power, Phillips, RIM, Simula Research and the Tyndall Institute.



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## Fees and Scholarships

Tuition fee information is available on [www.ucd.ie/fees](http://www.ucd.ie/fees). Please note that UCD offers a number of postgraduate scholarships for full-time, self-funding international students, holding an offer of a place on masters programmes. Please visit [www.ucd.ie/international/scholarships](http://www.ucd.ie/international/scholarships) for further information.

## Accommodation

UCD has accommodation for over 2,500 students across five locations. Places are limited and more information is available at [www.ucd.ie/residences/](http://www.ucd.ie/residences/). For information and advice on living off campus, please contact the UCD Residences Off-Campus Office or the UCD Student Union Accommodation Services. Please visit [www.ucd.ie/residences/accommodation-booking-support/](http://www.ucd.ie/residences/accommodation-booking-support/) for further details.

## Related Masters Programmes of Interest

- MSc Mathematical Science
- Higher Diploma Mathematical Science

## Apply Now

This programme receives significant interest so please apply early online at [www.ucd.ie/apply](http://www.ucd.ie/apply)

## Entry Requirements

- This programme is intended for applicants who hold a degree with high mathematical content such as Mathematics, Mathematics & Education, or Economics & Finance. An upper second class honours degree or international equivalent is required.
- Applicants whose first language is not English must also demonstrate English language proficiency of IELTS 6.5 (no band less than 6.0 in each element), or equivalent.

## Staff Profile

**Professor Gary McGuire,**  
UCD School of Mathematics  
and Statistics



Gary McGuire is the director of the Claude Shannon Institute for Coding, Cryptography and Discrete Mathematics, which is part of the Security and Trust cluster of the UCD Institute for Discovery.

"I have taught Elliptic Curve Cryptography, which takes students from the mathematical theory of elliptic curves to its real-world applications in cryptography. I am the director of the Claude Shannon Institute, where we have a team doing cutting-edge research in cryptography and coding theory."

## EU Enquiries

Programme Administrator

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[www.ucd.ie/courses/ma-mathematics](http://www.ucd.ie/courses/ma-mathematics)

UCD School of Mathematics and Statistics, University College Dublin, Belfield, Dublin 4.

**Non-EU Enquiries** ✉ : [internationaladmissions@ucd.ie](mailto:internationaladmissions@ucd.ie)  
[www.ucd.ie/international](http://www.ucd.ie/international)